Power Amplifier
Q2 - Q4

AUDAC

PROFESSIONAL AUDIO EQUIPMENT

Power Amplifier Q2 – Q4

User Manual & Installation Guide

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Introduction

This section briefly describes the possibilities of the Q2 – Q4 power amplifier.

The Q2 – Q4 power amplifier is developed as an easy to use, flexible solution for multi-functional use.

During the development of the Q2 – Q4 power amplifier, the AUDAC-engineers wanted to achieve three goals:

- Easy to use
- Excellent sound quality
- Modern and advanced design

AUDAC's Q-series professional power amplifiers are suitable for the most common low impedance high power sound systems. The amplifiers are build as a 4 channel amplifier with the possibility to bridge channels. The amplifiers are equipped with a multi purpose protection circuit which detects DC malfunction, short circuit, overheating and signal overload.

The amplifiers are equipped with a balanced XLR per channel input and a speaker connector for each channel output.

Chapter

1

Environment

Do not place this unit in an enclosed environment such as a bookshelf or closet. Ensure there is adequate ventilation to cool the unit. Do not block the ventilation openings.

Do not place the unit in environments which contain high levels of dust, heat, moisture or vibration.

Do not use the unit near water or other liquids. Make sure no water or other liquids can be spilled, dripped or splashed on the unit.

Do not place objects on top of the unit.

Place the unit on a stable base.

Safety Requirements

Always handle the unit with care.

Only use a grounded socket outlet and a power cord with grounding plug.

This unit is not a toy. It should not be operated by children.

Do not stick objects through the openings of the Q2 – Q4.

Do not open the unit. (risk for electrical shock)

Always read the user manual before getting started.

CAUTION – SERVICING

This unit contains no user serviceable parts. Refer all servicing to qualified service personnel. Do not perform any servicing unless you are qualified to do so.

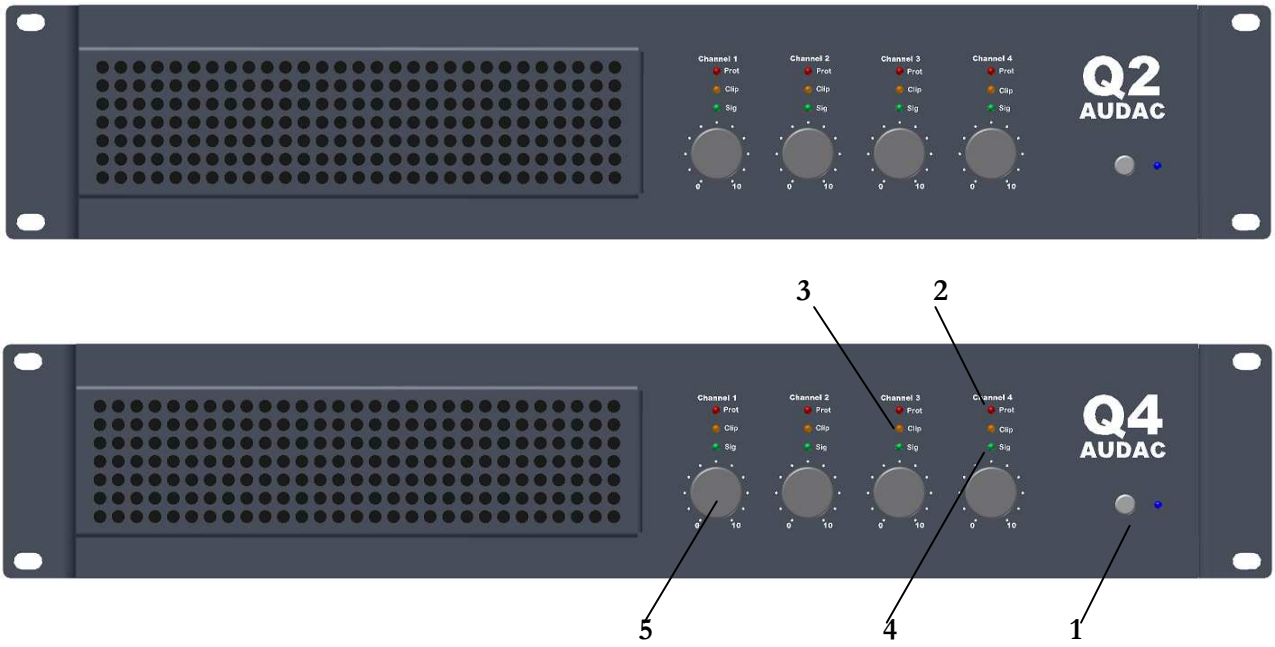
Note

This product conforms to the following European Standards: EN 50081-1: 1992, EN 50082-1: 1992, EN 60065: 1994

Chapter

2

Overview front panel of the Q2 – Q4



1 Power switch and indicator

Use the power switch to put the power of the Q2 – Q4 on or off. The led indicates if the power is on or off.

2 Protection indicator

This led indicates when the protection circuit of the corresponding channel is activated. Their will be no output on the corresponding channel when the protection circuit is activated. This led will also be lighted during the start up of the amplifier. When problems with the amplifier are corrected, the led goes out and normal operation can be continued.

3 Clip indicator

This led indicates that there is an excessively high input signal on the corresponding channel.

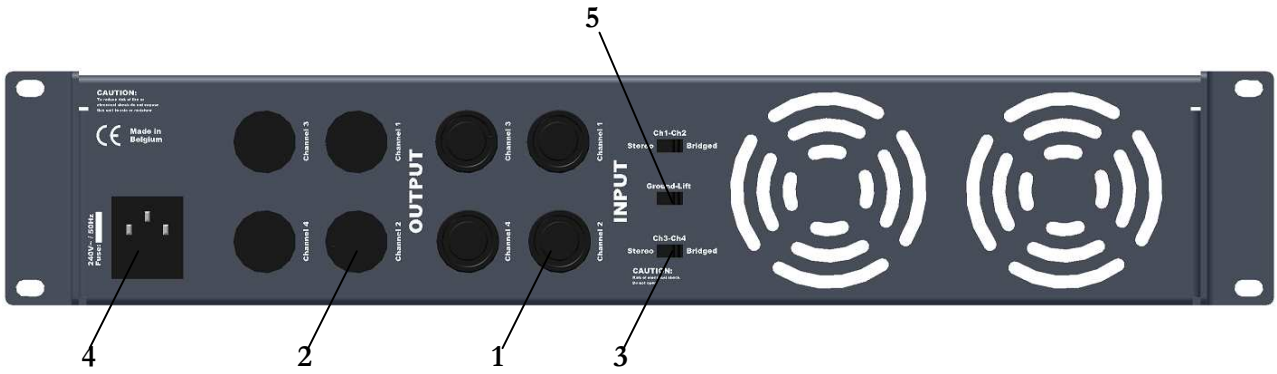
4 Signal indicator

This led indicates that there is a signal on the corresponding channel.

5 Input adjuster

This input adjuster will attenuate the input signal of the corresponding channel.

Overview rear panel of the Q2 – Q4



1 Input connector

Each channel is equipped with a balanced input connector (3-pin XLR). For these input connectors the standard rules for wiring up are applied.

Pin1 = Ground
Pin2 = Hot (Signal +)
Pin3 = Cold (Signal -)

2 Output connectors

Each output channel is equipped with speaker type connectors. Be sure that the amplifier is in the correct mode before connecting the speakers.

3 Mode switch

With this mode switch you can set the Q2 – Q4 into different modes: stereo or bridged.

4 AC Power connector

Plug in this power cord into the AC outlet.

5 Ground-Lift switch

With this switch you can detach the device from the ground to cancel out hum.

Operating modes

Stereo

In stereo mode the connections for the loud-speakers are as follows.

Output channel 1 and channel 3
Pin 1+ CH1 out (CH3 out) Pin 1- GND
Pin 2+ CH2 out (CH4 out) Pin 1- GND

Output channel 2 and channel 4
Pin 1+ CH2 out (CH4 out) Pin 1- GND
Pin 2+ / Pin 2- /

Bridged

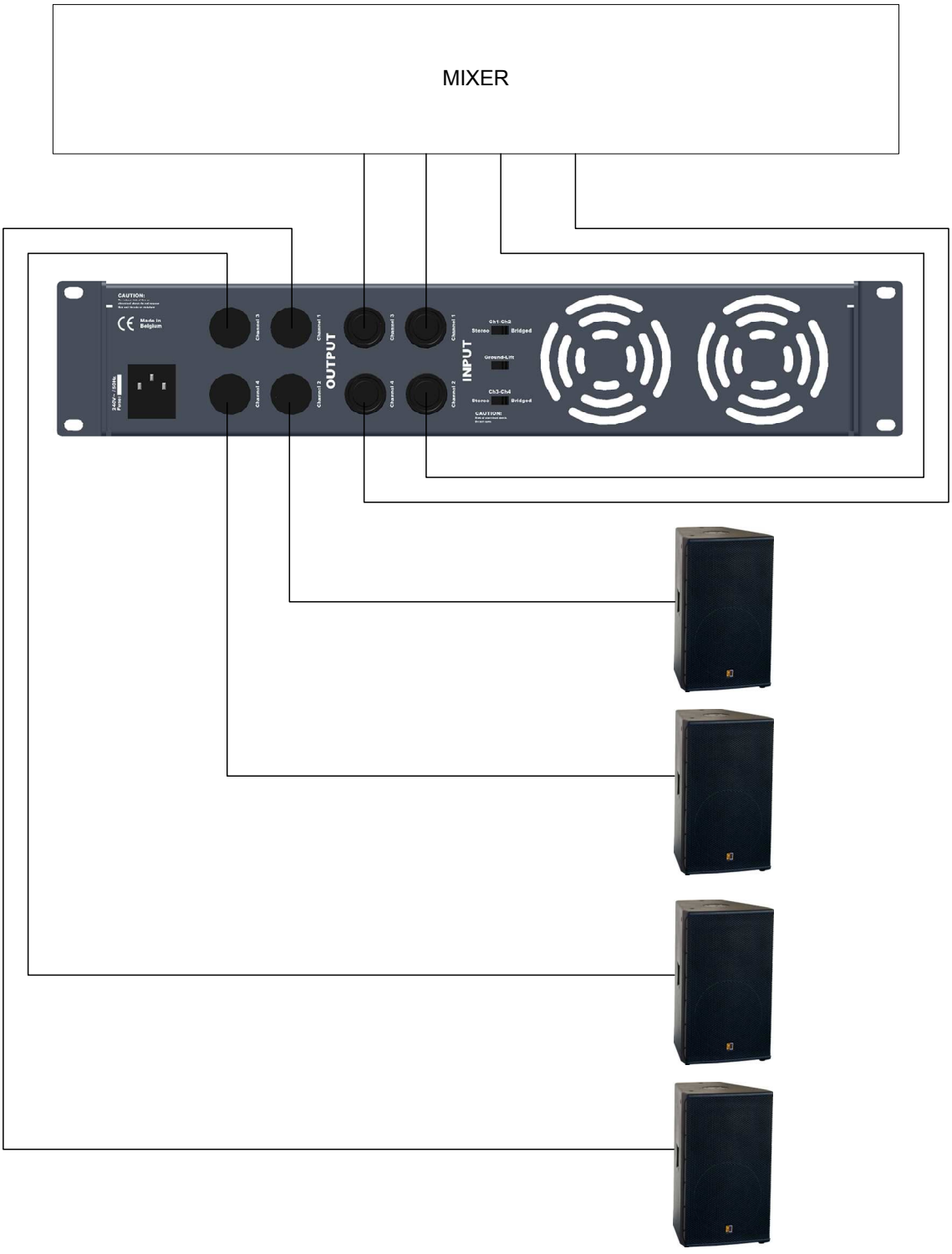
In bridge mode the connections for the loud-speaker are as follows.

Output channel 1 and channel 3
Pin 1+ CH1 out (CH3 out) Pin 2+ CH2 out (CH4 out)

Only channel 1 and channel 3 are supported for bridge mode.
Do not connect anything to channel 2 and channel 4 when set into bridge mode.

Applications

Stereo



Bridged


MIXER
OUTPUT
INPUT
Made in Belgium
Ch1-Ch2
Stereo
Bridged
Ground-Lift
Ch3-Ch4
Stereo
Bridged

Chapter

3

Getting Started

The Q2 – Q4 power amplifier can be switched on by pressing the power button on the front panel. The blue "ON" led will light up if the device is powered-up.

The volume of the input signals can be controlled by turning the volume knobs of the input signals on the front panel of the Q2 – Q4. A VU-bar indicates the signal level of the output signal.

The output section on the rear panel of the Q2 – Q4 has one low impedance output per channel.

Connecting the speakers

A 4Ω speaker (or two 8Ω speakers in parallel) can be connected to the 4Ω low impedance output at the rear.

Make sure the total combined load of the speakers does not exceed 300W @ 4Ω/channel for the Q2 or 600W @ 4Ω/channel for the Q4 . This is the maximum power the Q2 – Q4 amplifier can give per channel.

Wire up the System

The Q2 – Q4 amplifier is very easy in use. Following cable specs must be followed to guarantee a correct operation:

1. Speaker cable for amplified zone output 4Ω : minimum 2x1.5 mm2 (distance >15m: 2x2.5mm2 or more).

2. Music sources and other line level inputs: must be connected with audio cable of good quality.

Chapter

4

Additional Information Q2 – Q4

Technical specifications

Input Impedance	20 kΩ balanced
Input Sense	0.775 V
Frequency Response	20 Hz – 20 kHz
THD+N (1 kHz)	Less than 0.05% @ 8 Ω
Signal to Noise ratio	>93 dB
Slew Rate	40V/µsec
Cross Talk (1 kHz)	>70 dB @ 8 Ω
Damping Factor	>400
RMS Power @ 8 Ω Q2	4 x 200 W
RMS Power @ 4 Ω Q2	4 x 300 W
RMS Power @ 8 Ω Bridged Q2	2 x 600 W
RMS Power @ 8 Ω Q4	4 x 400 W
RMS Power @ 4 Ω Q4	4 x 600 W
RMS Power @ 8 Ω Bridged Q4	2 x 1200 W
Protection DC Short Circuit Overheating Overload	
Power Supply	230V AC, 50-60Hz
Weight Q2	24.0 kg
Weight Q4	28.0 kg
Dimensions (W x H x D)	483 mm x 88mm x 385mm
Unit height	2HE

Personal Notes